

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A tactile alarm system for use in environments having a plurality of audible and/or visual alarms, the tactile alarm system including:

a plurality of detectors receiving input representative of a plurality of predetermined physical properties, each detector having an output to actuate one of more of the plurality of audible and/or visual alarms when one or more of the detected physical properties falls outside a predetermined range, the alarm system being characterised by a tactile alarm connected to the skin of a person and being in communication with the output of one or more detectors, the tactile alarm being actuated in response to selected ones of the plurality of predetermined physical properties falling outside their respective predetermined ranges.
2. A tactile alarm system according to claim 1 wherein the output of each detector is communicated to the tactile alarm by radio frequency radiation.
3. A tactile alarm system according to claim 1 having a monitor disposed intermediate the output of each detector and the tactile alarm and plurality of audible and/or visual alarms, the monitor processing the input from each detector and providing an activation signal to the one or more audible and/or visual alarms and the tactile alarm.
4. A tactile alarm system according to any one of claims 1 to 3 wherein the tactile alarm is in the form of a strip having a receiver for receiving the signals to activate the tactile alarm.
5. A tactile alarm system according to claim 4 wherein the strip is divided into segments wherein each segment corresponds to a different predetermined property to provide a tactile alarm signal to the person when an activation signal provided in one segment corresponds to a particular predetermined property falling outside its predetermined range.
6. A tactile alarm system according to any one of claims 1 to 5 wherein the tactile alarm provides stimulation being selected from the group consisting of heat or cold sensations, electrical stimulation, and vibration stimulation.
7. A tactile alarm system according to claim 6 wherein the tactile alarm provides pulses that are coded by modulating their intensity or amplitude, or modulating their frequency.
8. A tactile alarm system according to claim 6 wherein the tactile alarm provides pulses that are coded such that a particular coding corresponds to a predetermined physical property.
9. A tactile alarm system according to claim 7 wherein coding of the tactile alarm pulses varies proportionally with a predetermined property as it falls outside its predetermined range.
10. A tactile alarm system according to any one of claims 1 to 9 wherein the tactile alarm is connected to a body part of a person.

11. An audible alarm system according to claim 10 wherein the body part is chosen from the group consisting of fingers, wrists, forearms, chests, foreheads, necks, shoulders, backs, legs and feet.
12. The tactile alarm system according to any one of claims 1 to 11 including a self tester which provides an indication of the operability of the tactile alarm system.
13. A tactile alarm system according to any one of claims 1 to 12 including a failure alert which is actuated in response to a failure in the tactile alarm system to activate the tactile alarm in response to a predetermined property falling outside its predetermined range.
14. A tactile alarm system according to any one of claims 1 to 13 wherein the plurality of audible and/or visual alarms are deactivated so that only the tactile alarm is capable of being activated.
15. A tactile alarm system according to any one of claims 1 to 13 wherein the predetermined physical properties include temperature, blood pressure, mass, length measurements, ECG data, oxymetry data, movement, electrical current or voltage, velocity, acceleration, ionising and non-ionising radiation, pressure, time or optical intensity.
16. A tactile alarm system according to any one of claims 1 to 14 including a plurality of tactile alarms such that each tactile alarm is disposed on a different person and wherein each tactile alarm is configured to activate in response to a predetermined one or more of the physical properties measured by the detectors of interest to each person.
17. A method of employing a tactile alarm system according to any one of claims 1 to 16, the method including the steps of:
 - detecting a plurality of predetermined physical properties and generating detector signals being indicative of the properties;
 - communicating the detector signals to a plurality of audible and/or visual alarms such that when one or more of the physical properties falls outside a predetermined range, one or more of the audible and/or visual alarms is activated; and
 - disposing a tactile alarm on a person wherein the tactile alarm is in communication with the detector signals and wherein the tactile alarm is activated in response to a selected one or more of the predetermined physical properties falling outside their predetermined range.
18. A method of employing a tactile alarm system according to claim 17 including the step of communicating the detector signals by radio frequency radiation.

19. A method of employing a tactile alarm system according to claim 18 including the steps of:

- disposing a monitor intermediate the detectors and the plurality of audible and/or visual alarms;
- processing the detector signals at the monitor; and
- providing one or more of the plurality of audible and/or visual alarms and the tactile alarm with an alarm activation signal.

20. A method of employing a tactile alarm system according to claim 20 including the step of dividing the tactile alarm into a plurality of segments wherein each segment corresponds to a different property such that a tactile alarm signal is provided to the person from a respective segment when a corresponding property falls outside its predetermined range.

21. A method of employing a tactile alarm system according to claim 20 wherein the tactile alarm signal is selected from the group comprising heat or cold sensations, electrical stimulation and vibration stimulation.

22. A method of employing a tactile alarm system according to claim 21 including the step of coding the tactile alarm signal by modulating the signal intensity or frequency.

23. A method of employing a tactile alarm system according to claim 22 including the step of disposing the tactile alarm on the body of a person from the group comprising fingers, wrists, forearms, chests, foreheads, necks, shoulders, backs, legs and feet.

24. A method of employing a tactile alarm system according to claim 23 wherein the physical properties may include temperature, blood pressure, mass, length measurements, ECG data, oxymetry data, movement, electrical current or voltage, velocity, acceleration, ionising and non-ionising radiation, pressure, time or optical intensity.

25. A method of employing a tactile alarm system according to any one of claims 17 to 24 including the steps of providing a plurality of tactile alarms and configuring each tactile alarm to activate in response to a predetermined one or more of the detected physical properties falling outside their predetermined ranges.